IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Inventorship ..... Tjong et al.
Applicant..... Microsoft Corporation
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Examiner ..... Joo, Joshua
Attorney's Docket No. MS1-921US

Title: Point-to-Point Data Communication Implemented with Multipoint Network Data Communication Components

APPEAL BRIEF

To: MS: Appeal Brief - Patents
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Pursuant to 37 C.F.R. §41.37, Appellant hereby submits an Appeal Brief for Application No. 09/945,369 filed August 8, 2001. A Notice of Appeal was filed February 1, 2006. Accordingly, Appellant appeals to the Board of Patent Appeals and Interferences seeking review of the Examiner's rejections.

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(i) REAL PARTY IN INTEREST

The real party in interest is the Microsoft Corporation, the assignee of all right and title to the subject invention.

(ii) RELATED APPEALS AND INTERFERENCES

Appellant is not aware of any other appeals or interferences which will directly affect, be directly affected by, or otherwise have a bearing on the Board's decision to this pending appeal.

(iii) STATUS OF CLAIMS

Allowed Claims: No claims have been allowed.

Canceled Claims: Claims 15-31 and 45-58 were previously canceled.

Amended Claims: Claims 1-3, 5-14, and 32-44 have been previously amended.

Pending Claims: Claims 1-14 and 32-44 stand rejected and are pending in this Application as set forth in the Claims Appendix on page 14.

Appealed Claims: All of the pending claims are subject to this appeal and stand rejected under 35 U.S.C. §103(a) for obviousness over the Background of Appellant's Specification (hereinafter, "Background") in view of U.S. Patent No. 6,233,619 to Narisi et al. (hereinafter, "Narisi").

(iv) STATUS OF AMENDMENTS

A Final Office Action was issued on October 4, 2005 whereupon Appellant filed a Response on November 29, 2005 to address the 35 U.S.C. §103 rejection of pending claims 1-14 and 32-44. Claims 1, 9-14, and 32 were amended in the Response.

An Advisory Action was issued on January 13, 2006 dismissing Appellant's traversal and maintaining the rejection of the pending claims 1-14 and 32-44.

Appellant filed a Notice of Appeal on February 1, 2006 in response to the Advisory Action and the Final Office Action.

(v) SUMMARY OF CLAIMED SUBJECT MATTER

Following is a concise explanation of each independent claim 1 and 32 which includes specification references and exemplary drawing reference characters. As explained, the independent claims are not limited solely to the elements identified by the reference characters.

Claim 1 is directed to a data communication system (500; Fig. 5) configured to communicatively link a host device (502) and a remote client device (504) with a point-to-point data communication link (506), the host device (502) and the remote client device (504) each configured for multipoint data communication over a distributed network. The data communication system (500) includes a remote data communication interface driver (530) of the host device (502) implemented in the remote client device (504), the remote data communication interface driver (530) configured to communicatively link with a data communication interface (520) of the host device (502) via the point-to-point data communication link (506). The data communication system (500) also includes a virtual driver component (528) configured to communicate with the remote data communication interface driver (530) and the remote client device (504), and includes a virtual network (532) configured to communicatively link the remote data communication interface driver (530) and the virtual driver component (528) in the remote client device (504).

With reference to Fig. 5, Appellant describes that a Remote NDIS miniport driver layer (530) of a host computing device (502) is implemented in a client device (504) (instead of in the host computing device) which facilitates a point-to-point communication link (506) between the two devices without having

to configure the host computing device (502) with interface components to communicate with the client device (504). The host computing device (502) can be communicatively linked with any mobile client device without having driver(s) for a particular device installed on the host computing device (*Specification* p.14, lines 8-16; Fig. 5).

Claim 32 is directed to a method (Fig. 7) for implementing a point-to-point data communication link (506; Fig. 5) between computing devices. The method is described with reference to Fig. 7 in the specification on page 17, line 7 to page 19, line 5. The method includes implementing a remote network communication component (530) of a host computing device (502) in a remote client computing device (504), the remote network communication component (530) designed for data communication over a distributed network (block 700; *Specification* p.17, lines 14-22). Appellant describes that the Remote NDIS miniport driver layer (530) (implemented in the remote client device) is communicatively linked with the Remote NDIS component (520) at host computing device (502) via the point-to-point communication link (506) (*Specification* p.17, lines 20-22).

The method also includes implementing a connection interface (534, 536) to couple the remote network communication component (530) with the host computing device (502) (block 702; *Specification* p.17, line 23 to p.18, line 5). The method also includes implementing a virtual network (532) to communicatively link the remote network communication component (530) and a virtual driver component (528) of the remote client computing device (504) (block 704; *Specification* p.18, lines 6-10). Appellant describes that virtual LAN

(532) communicatively links the Remote NDIS miniport driver layer (530) and the virtual miniport driver layer (528) at client device (504) (*Specification* p.18, lines 8-10).

(vi) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The rejection of all pending claims 1-14 and 32-44 which stand rejected under 35 U.S.C. §103(a) for obviousness over the Background of Appellant's Specification (hereinafter, "Background") in view of U.S. Patent No. 6,233,619 to Narisi et al. (hereinafter, "Narisi") as set forth in the Final Office Action dated October 4, 2005.

(vii) ARGUMENT

(A) Narisi and/or the Background do not teach or suggest a remote data communication interface driver of a host device implemented in a remote client device.

Claims 1-14 and 32-44

For example, Claim 1 recites (in part):

> A data communication system configured to communicatively link a host device and a remote client device with a point-to-point data communication link, the host device and the remote client device each configured for multipoint data communication over a distributed network, the data communication system comprising:
>
> **a remote data communication interface driver of the host device implemented in the remote client device**, the remote data communication interface driver configured to communicatively link with a data communication interface of the host device via the point-to-point data communication link; …

Appellant submits that Narisi and/or the Background do not teach or suggest "a remote data communication interface driver of the host device implemented in the remote client device", as recited in claim 1.

With reference to Fig. 5, Appellant describes that a Remote NDIS miniport driver layer (530) of a host computing device (502) is implemented in a client device (504) (instead of in the host computing device) which facilitates a point-to-point communication link (506) between the two devices without having to configure the host computing device with interface components to communicate with the client device. The host computing device can be communicatively linked with any mobile client device without having driver(s) for a particular device installed on the host computing device (*Specification* p.14, lines 8-16; Fig. 5).

In the Background with reference to Fig. 4, Appellant describes a computing device (402) that includes a Remote NDIS miniport driver layer (414), and the computing device (402) is connected to a remote device (408) via a USB connection (*Background* p.6, lines 14-15; Fig. 4). The Examiner "interprets the computing device of Applicant's Background [Fig. 4] as the client device, and the remote device of Applicant's Background as the host device" (*Final Office Action* p.12, ¶45). This interpretation is incorrect which leads to an incorrect conclusion that "a remote data communication interface driver of the host device implemented in the client device" (as recited in claim 1) is described in the Background (*Final Office Action* p.12). The Office cites to the Detailed Description in the specification at page 14, lines 8-10 and makes a comparison to the Background at page 6, lines 14-15 (*Final Office Action* pp. 11-12).

The Office's interpretation of the Background Fig. 4 that the computing device is the client device, and that the remote device is the host device is

incorrect because the Background is described with reference to Figs. 1-4, each of which include a computing device (e.g., host computing device) having communication components to communicate with client or remote devices via a communication link.

Fig.1 includes a host computing device (102) for conventional point-to-point communication with a client device (104) via a serial connection between serial ports of the two devices (*Background* p.3, lines 15-17). Similarly, Fig. 2 includes a host computing device (202) for point-to-point communication with a client device (204) via a point-to-point USB connection (*Background* p.3, lines 15-17).

Fig. 3 includes a computing device (302) having multipoint network data communication components for communication with network-connected device(s) via a LAN (310) (*Background* p.4, lines 12-14; p.6, lines 4-5). Fig. 4 includes the computing device (402) having the Remote NDIS miniport driver layer (414) for communication with remote device (408) via a USB connection (*Background* p.6, lines 14-15; Fig. 4).

Accordingly, and contrary to the Office's interpretation, the computing device (402) in Fig. 4 is the host computing device and the remote device (408) is the client device. The Background describes that a host computing device can include a Remote NDIS miniport driver layer (414). Only the Detailed Description then describes the claimed subject matter which includes implementing a host computing device's Remote NDIS driver layer in an external device (e.g., a client, a remote device, a portable device, and the like) (*Specification* p.10, line 19 to p.11, line 7; p.14, lines 8-16).

Further, claim 1 clearly states that the client device is a *remote* client device which includes a host computing device's Remote NDIS driver layer. For example, Fig. 5 illustrates a host computing device (502) and a remote client device (504) which includes the Remote NDIS miniport driver layer (530) of the host computing device (502) (*see Specification* p.14, lines 8-16 for examples of a remote client device). As described, an advantage to having remote devices implemented with a Remote NDIS miniport driver layer of a host computing device is that the host computing device does not need to then have the various and different driver(s) for the remote devices installed, but can still be communicatively linked with any number of the mobile client devices (*Specification* p.16, lines 6-12; Fig. 6).

For at least these reasons, Narisi and/or the Background do not teach or suggest "a remote data communication interface driver of the host device implemented in the remote client device", as recited in claim 1.

Accordingly, independent claims 1 and 32 are allowable over the Background-Narisi combination and Appellant respectfully requests that the §103 rejection be withdrawn. Given that claims 2-14 depend from claim 1, and that claims 33-44 depend from claim 32, Appellant submits that these dependent claims are likewise allowable over the Background-Narisi combination and respectfully requests that the §103 rejection be withdrawn.

(B) Narisi and/or the Background do not teach or suggest a remote data communication interface driver (of a host device implemented in a remote client device) to communicatively link with a data communication interface of the host device.

Claims 1-14 and 32-44

For example, Claim 1 recites (in part):

> ...
> a remote data communication interface driver of the host device implemented in the remote client device, **the remote data communication interface driver configured to communicatively link with a data communication interface of the host device** via the point-to-point data communication link; ...

Appellant submits that Narisi and/or the Background do not teach or suggest "the remote data communication interface driver configured to communicatively link with a data communication interface of the host device", as recited in claim 1. The Office merely cites to the Background Fig. 4 for the host computing device (402) which includes a Remote NDIS miniport driver layer (414) to communicate with a remote device (408) (*Office Action* p.2, ¶4).

As described above in Argument A, Appellant describes in the Background with reference to Fig. 4, a computing device (402) that includes a Remote NDIS miniport driver layer (414), and the computing device (402) is connected to a remote device (408). There is no indication in Fig. 4 or elsewhere in the Background of a remote data communication interface driver of the computing device (402) being implemented in the remote device (408), as described in claim 1. Clearly then, Narisi and/or the Background do not teach or suggest "the

remote data communication interface driver" – in a remote client device – "configured to communicatively link with a data communication interface of the host device", as recited in claim 1.

Accordingly, independent claims 1 and 32 (in combination with dependent claim 33) are allowable over the Background-Narisi combination for at least these reasons and Appellant respectfully requests that the §103 rejection be withdrawed. Given that claims 2-14 depend from claim 1, and that claims 33-44 depend from claim 32, Appellant submits that these dependent claims are likewise allowable over the Background-Narisi combination and respectfully requests that the §103 rejection be withdrawn.

Conclusion

Appellant respectfully requests that the 35 U.S.C. §103 rejection of all pending claims 1-14 and 32-44 be overturned and that the pending claims be allowed to issue.

Respectfully Submitted,

Dated: May 1, 2006 By: _____

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(viii) CLAIMS APPENDIX

1. (previously presented) A data communication system configured to communicatively link a host device and a remote client device with a point-to-point data communication link, the host device and the remote client device each configured for multipoint data communication over a distributed network, the data communication system comprising:

a remote data communication interface driver of the host device implemented in the remote client device, the remote data communication interface driver configured to communicatively link with a data communication interface of the host device via the point-to-point data communication link;

a virtual driver component configured to communicate with the remote data communication interface driver and the remote client device; and

a virtual network configured to communicatively link the remote data communication interface driver and the virtual driver component in the remote client device.

2. (previously presented) A data communication system as recited in claim 1, wherein the remote data communication interface driver is a Remote Network Driver Interface Specification (NDIS) driver and the data communication interface is a Remote NDIS component configured to communicate with the Remote NDIS driver via the point-to-point data communication link.

3. (previously presented) A data communication system as recited in claim 1, wherein the remote data communication interface driver is a Remote Network Driver Interface Specification (NDIS) driver and the data communication interface is a Remote NDIS component configured to communicate Remote NDIS messages with the Remote NDIS driver via the point-to-point data communication link.

4. (original) A data communication system as recited in claim 1, wherein the virtual network is a local area network.

5. (previously presented) A data communication system as recited in claim 1, wherein the remote data communication interface driver is a Remote Network Driver Interface Specification (NDIS) driver configured to communicate with the virtual driver component via the virtual network.

6. (previously presented) A data communication system as recited in claim 1, wherein the remote data communication interface driver is a Remote Network Driver Interface Specification (NDIS) driver configured to communicate Remote NDIS messages with the virtual driver component via the virtual network.

7. (previously presented) A data communication system as recited in claim 1, wherein the remote data communication interface driver is a Remote Network Driver Interface Specification (NDIS) driver and the data communication interface is a Remote NDIS component configured to communicate with the Remote NDIS driver via the point-to-point data communication link, and the Remote NDIS driver is configured to communicate with the virtual driver component via the virtual network.

8. (previously presented) A data communication system as recited in claim 1, wherein the remote data communication interface driver is a Remote Network Driver Interface Specification (NDIS) driver and the data communication interface is a Remote NDIS component configured to communicate Remote NDIS messages with the Remote NDIS driver via the point-to-point data communication link, and the Remote NDIS driver is configured to communicate the Remote NDIS messages with the virtual driver component via the virtual network.

9. (previously presented) A data communication system as recited in claim 1, further comprising a connection interface configured to couple the point-to-point data communication link with the remote client device.

10. (previously presented) A data communication system as recited in claim 1, further comprising a Universal Serial Bus data communication interface configured to couple the point-to-point data communication link with the remote client device.

11. (previously presented) A data communication system as recited in claim 1, further comprising a 1394 bus data communication interface configured to couple the point-to-point data communication link with the remote client device.

12. (previously presented) A data communication system as recited in claim 1, further comprising a wireless data communication interface configured to couple the point-to-point data communication link with the remote client device.

13. (previously presented) A data communication system as recited in claim 1, further comprising a Bluetooth data communication interface configured to couple the point-to-point data communication link with the remote client device.

14. (previously presented) A data communication system as recited in claim 1, further comprising an infrared data communication interface configured to couple the point-to-point data communication link with the remote client device.

15-31. (canceled)

32. (previously presented) A method for implementing a point-to-point data communication link between computing devices, the method comprising:

implementing a remote network communication component of a host computing device in a remote client computing device, the remote network communication component designed for data communication over a distributed network;

implementing a connection interface to couple the remote network communication component with the host computing device; and

implementing a virtual network to communicatively link the remote network communication component and a virtual driver component of the remote client computing device.

33. (previously presented) A method as recited in claim 32, wherein implementing the remote network communication component includes implementing a data communication interface driver to communicatively link with a data communication interface of the host computing device via the point-to-point data communication link.

34. (previously presented) A method as recited in claim 32, wherein implementing the remote network communication component includes implementing a Remote Network Driver Interface Specification (NDIS) driver to communicatively link with a Remote NDIS component of the host computing device via the point-to-point data communication link.

35. (previously presented) A method as recited in claim 32, wherein implementing the remote network communication component includes implementing a Remote Network Driver Interface Specification (NDIS) driver to communicate Remote NDIS messages with a Remote NDIS component of the host computing device via the point-to-point data communication link.

36. (previously presented) A method as recited in claim 32, wherein implementing the connection interface includes providing a point-to-point data communication protocol interface.

37. (previously presented) A method as recited in claim 32, wherein implementing the connection interface includes providing a Universal Serial Bus data communication interface.

38. (previously presented) A method as recited in claim 32, wherein implementing the connection interface includes providing a 1394 bus data communication interface.

39. (previously presented) A method as recited in claim 32, wherein implementing the connection interface includes providing a wireless data communication interface.

40. (previously presented) A method as recited in claim 32, wherein implementing the connection interface includes providing a Bluetooth data communication interface.

41. (previously presented) A method as recited in claim 32, wherein implementing the connection interface includes providing an infrared data communication interface.

42. (previously presented) A method as recited in claim 32, wherein implementing the virtual network includes providing a virtual local area network.

43. (previously presented) A method as recited in claim 32, wherein implementing the remote network communication component includes implementing a Remote Network Driver Interface Specification (NDIS) driver, and wherein implementing the virtual network includes providing a virtual local area network to communicate Remote NDIS messages between the Remote NDIS driver and the virtual driver component.

44. (previously presented) A method as recited in claim 32, wherein implementing the remote network communication component includes implementing a Remote Network Driver Interface Specification (NDIS) driver to communicate Remote NDIS messages with a Remote NDIS component of the host computing device via the point-to-point data communication link, and wherein implementing the virtual network includes implementing a virtual local area network to communicate the Remote NDIS messages between the Remote NDIS driver and the virtual driver component.

45-58. (canceled)

(ix) EVIDENCE APPENDIX

None.

(x) RELATED PROCEEDINGS APPENDIX

None.